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10/532,072	01/09/2006	Takeshi Tanaka	L8638.05102	4037

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EXAMINER
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PHAM, TIMOTHY X

ART UNIT	PAPER NUMBER
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2617

MAIL DATE	DELIVERY MODE
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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/532,072	<b>Applicant(s)</b> TANAKA ET AL.	
	<b>Examiner</b> TIMOTHY PHAM	<b>Art Unit</b> 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 and 40-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21, and 40-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-21, and 40-42 are rejected under 35 U.S.C. 102(e) as being anticipated by Saito et al. (hereinafter “Saito”; US 2002/0172207; cited in IDS).

Regarding claim 1, Saito discloses a radio communication management method in a radio communication system which manages link connection of a mobile terminal using HMIPv6 (paragraphs [0008], [0030], [0178], noted an IPv6),

wherein the mobile terminal transmits information on authentication for accessing a desired network together with information for changing the link connection with respect to a server which manages the link connection of the mobile terminal to reduce a time required for changing the link connection of the mobile terminal (Fig. 30, references S104 through S108; paragraphs [0010], [0015], [0019], [0022]- [0023], [0028], [0030], where Saito discusses the operation configuration for reporting a location change including authentication data each time a terminal moves between subnets, and achieves scalability an handoff by driving a network area into two layers using two different protocols).

Regarding claim 2, Saito discloses the radio communication management method according to claim 1 above, wherein the mobile terminal transmits the information for changing the link connection and the information on the authentication as one piece of information, and the server which manages the link connection acquires each of the information for changing the link connection and the information on the authentication from the one piece of information (Abstract; paragraphs [0027], [0030], [0048], [0050], [0180]-[0181], [0326], e.g., a mobile node periodically transmits movement information of the node or transmit information when moving between sub-networks to a home agent).

Regarding claim 3, Saito discloses the radio communication management method according to claim 1 above, wherein the server which manages the link connection acquires an authentication result by an authentication process using the information on the authentication (Fig. 6; paragraphs [0016], [0019], [0023]-[0024], [0269], [0355], e.g., the terminal device 302 determines whether authentication data stored in the binding update packet is valid or not, and if it is valid, then registers the care-of-address of the terminal 301).

Regarding claim 4, Saito discloses the radio communication management method according to claim 3 above, wherein the server which manages the link connection communicates with an authentication server which authenticates the mobile terminal to acquire the authentication result (Fig. 7; paragraphs [0016], [0019], [0023]-[0024], e.g., the home agent 302 check whether the authentication data is valid or not, and if it determines that the data is valid, it registers the care-of-address).

Regarding claim 5, Saito discloses the radio communication management method according to claim 3 above, comprising the steps of: transmitting information notifying that the change of the link connection of the mobile terminal has been confirmed (paragraphs [0019], [0178], [0343], e.g., when the mobile node moves from the access router 3-2 to the access router 3-3, the mobile node immediately transmits a router solicitation message to the access router 3-3) and the authentication result as one piece of information to the mobile terminal (paragraphs [0023]-[0024], e.g., the home agent 302 determines whether authentication data stored in the binding update packet is valid or not).

Regarding claim 6, Saito discloses the radio communication management method according to claim 3 above, wherein the server which manages the link connection transmits information notifying that the change of the link connection of the mobile terminal has been confirmed to the mobile terminal (paragraphs [0019], [0178], [0343], e.g., when the mobile node moves from the access router 3-2 to the access router 3-3, the mobile node immediately transmits a router solicitation message to the access router 3-3), and thereafter transmits the authentication result to the mobile terminal in a case where the authentication result is capable of being acquired (paragraphs [0052], [0079], e.g., the gate way router performs a duplication check for the current address of the mobile node and transmits a registration acknowledgement message including the check result to the mobile node through the access router).

Regarding claim 7, Saito discloses the radio communication management method according to claim 6 above, wherein the server which manages the link connection sets a time until acquiring the authentication result (paragraphs [0054], e.g., the gateway router set a lifetime of the routing cache for each mobile node in accordance with a routing update interval time), and

transmits the authentication result to the mobile terminal together with information notifying that the change of the link connection of the mobile terminal has been confirmed, when next receiving the information for changing the link connection from the mobile terminal in a case where the authentication result is capable of being acquired within the time until acquiring the authentication result (paragraphs [0052], [0079], [0089], [0109], e.g., when the duplication check result for a current address of the mobile node is affirmative).

Regarding claim 8, Saito discloses the radio communication management method according to claim 7 above, wherein the server which manages the link connection sets a predetermined tentative permission time for which the mobile terminal tentatively permits an access to the desired network (paragraphs [0054], e.g., the gateway router set a lifetime of the routing cache for each mobile node in accordance with a routing update interval time), and transmits, to the mobile terminal, information notifying the permission of the access to the desired network only for the predetermined time together with the information notifying that the change of the link connection of the mobile terminal has been confirmed (paragraph [0052], e.g., the gateway router performs a duplication check for the current address of the mobile node, and transmits a registration acknowledgement message including the check result to the mobile node).

Regarding claim 9, Saito discloses the radio communication management method according to claim 8 above, wherein the server which manages the link connection sets a predetermined permission time which is longer than the predetermined tentative permission time and for which the mobile terminal permits the access to the desired network (paragraphs [0051], [0053], e.g., hold time ranges of a paging cache), and transmits, to the mobile terminal, the

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information notifying the permission of the access to the desired network only for the predetermined permission time together with the information notifying that the change of the link connection of the mobile terminal has been confirmed in a case where the authentication result indicates authentication success (paragraph [0024], e.g., the home agent 302 determines whether authentication data stored in the binding update packet is valid or not).

Regarding claim 10, Saito discloses the radio communication management method according to claim 8 above, wherein the server which manages the link connection performs registration relating to the change of the link connection of the mobile terminal which has permitted the access to the desired network for the predetermined tentative permission time or only for the predetermined permission time (paragraphs [0054], e.g., the gateway router set a lifetime of the routing cache for each mobile node in accordance with a routing update interval time), and deletes the registration relating to the change of the link connection of the mobile terminal in a case where the predetermined tentative permission time or the predetermined permission time has elapsed (paragraphs [0272], [0295], e.g., the gateway router transmits the registration acknowledgement message to the access router to advertise that the registration is not permitted because the address is duplicated, then the paging cache is deleted after a predetermine time).

Regarding claim 11, Saito discloses the radio communication management method according to claim 3 above, wherein the server which manages the link connection sets a time until acquiring the authentication result (paragraphs [0054], [0056], [0081], [0090], [0092], [0099], e.g., routing update interval time), and judges the authentication result as authentication failure in a case where the authentication result is not capable of being acquired within the time

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until acquiring the authentication result (paragraphs [0016], [0019], [0023]-[0024], e.g., the terminal checks the authentication data, and if it determines that the data is valid, it registers the care-off-address of the terminal device in the binding update).

Regarding claims 12 and 40, Saito discloses the radio communication management method according to claims 5 and 6 respectively above, wherein the server which manages the link connection sets a predetermined connection prohibition time with respect to the mobile terminal (paragraphs [0054], e.g., the gateway router set a lifetime of the routing cache for each mobile node in accordance with a routing update interval time), and does not perform a process relating to the change of the link connection of the mobile terminal which has failed in the authentication and a process relating to the authentication for the predetermined connection prohibition time after notification of authentication failure in a case where the authentication failure is notified as the authentication result with respect to the mobile terminal (paragraph [0363], e.g., when the registration is not completed after a plurality of attempt, the mobile node 1 deletes the address using the virtual network prefix B and set the new address by using the physical network prefix C).

Regarding claims 13 and 41, Saito discloses the radio communication management method according to claim 5 and 6 respectively above, wherein the server which manages the link connection performs registration relating to the change of the link connection of the mobile terminal which has succeeded in the authentication only in a case where authentication success is notified as the authentication result with respect to the mobile terminal (paragraphs [0016], [0019], [0023]-[0024], e.g., the terminal device 303 checks the authentication data and determines data is valid, then performs registration the care-of-address of the terminal device



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301. After the registration, the terminal device 303 transmits an acknowledgement response packet to the terminal device 301).

Regarding claim 14, Saito discloses a radio communication management method in a radio communication system which manages link connection of a mobile terminal,

wherein the mobile terminal transmits information on authentication for accessing a desired network together with information for changing the link connection with respect to a server which manages the link connection of the mobile terminal terminal (Fig. 30, references S104 through S108; paragraphs [0010], [0015], [0019], [0022]- [0023], [0028], [0030], where Saito discusses the operation configuration for reporting a location change including authentication data each time a terminal moves between subnets, and achieves scalability an handoff by driving a network area into two layers using two different protocols), and

the server which manages the link connection sets a time until acquiring an authentication result by an authentication process using the information on the authentication (Fig. 6; paragraphs [0016], [0019], [0023]-[0024], [0269], [0355], e.g., the terminal device 302 determines whether authentication data stored in the binding update packet is valid or not, and if it is valid, then registers the care-of-address of the terminal 301), and transmits the authentication result to the mobile terminal in a case where the authentication result is capable of being acquired within the time until acquiring the authentication result (paragraphs [0052], [0079], e.g., the gate way router performs a duplication check for the current address of the mobile node and

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transmits a registration acknowledgement message including the check result to the mobile node through the access router).

Regarding claim 15, Saito discloses the radio communication management method according to claim 14 above, wherein the server which manages the link connection sets a predetermined tentative permission time for which the mobile terminal tentatively permits an access to the desired network (paragraphs [0054], e.g., the gateway router set a lifetime of the routing cache for each mobile node in accordance with a routing update interval time), and transmits, to the mobile terminal, information notifying the permission of the access to the desired network only for the predetermined time (paragraph [0052], e.g., the gateway router performs a duplication check for the current address of the mobile node, and transmits a registration acknowledgement message including the check result to the mobile node).

Regarding claim 16, Saito discloses the radio communication management method according to claim 15 above, wherein the server which manages the link connection sets a predetermined permission time which is longer than the predetermined tentative permission time and for which the mobile terminal permits the access to the desired network (paragraphs [0051], [0053], e.g., hold time ranges of a paging cache), and transmits, to the mobile terminal, the information notifying the permission of the access to the desired network only for the predetermined permission time in a case where the authentication result indicates authentication success (paragraph [0024], e.g., the home agent 302 determines whether authentication data stored in the binding update packet is valid or not).

Regarding claim 17, Saito discloses the radio communication management method according to claim 15 above, wherein the server which manages the link connection cuts the connection of the mobile terminal in a case where the predetermined tentative permission time or the predetermined permission time has elapsed (paragraphs [0272], [0295], e.g., the gateway router transmits the registration acknowledgement message to the access router to advertise that the registration is not permitted because the address is duplicated, then the paging cache is deleted after a predetermine time).

Regarding claim 19, Saito discloses the radio communication management method according to claim 14 above, wherein the server which manages the link connection sets a predetermined connection prohibition time with respect to the mobile terminal (paragraphs [0054], e.g., the gateway router set a lifetime of the routing cache for each mobile node in accordance with a routing update interval time), and does not perform a process relating to the mobile terminal which has failed in the authentication only for the predetermined connection prohibition time after notification of the authentication failure in a case where the authentication failure is notified as the authentication result with respect to the mobile terminal (paragraph [0363], e.g., when the registration is not completed after a plurality of attempt, the mobile node 1 deletes the address using the virtual network prefix B and set the new address by using the physical network prefix C).

Regarding claim 20, Saito discloses the radio communication management method according to claim 14 above, wherein the server which manages the link connection performs registration relating to the change of the link connection of the mobile terminal which has succeeded in the authentication only in a case where authentication success is notified as the

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authentication result with respect to the mobile terminal (paragraphs [0016], [0019], [0023]-[0024], e.g., the terminal device 303 checks the authentication data and determines data is valid, then performs registration the care-of-address of the terminal device 301. After the registration, the terminal device 303 transmits an acknowledgement response packet to the terminal device 301).

Regarding claim 18, Saito discloses a radio communication management method in a radio communication system which manages link connection of a mobile terminal,

wherein the mobile terminal transmits information on authentication for accessing a desired network together with information for changing the link connection with respect to a server which manages the link connection of the mobile terminal (Fig. 30, references S104 through S108; paragraphs [0010], [0015], [0019], [0022]- [0023], [0028], [0030], where Saito discusses the operation configuration for reporting a location change including authentication data each time a terminal moves between subnets, and achieves scalability an handoff by driving a network area into two layers using two different protocols), and

the server which manages the link connection sets a time until acquiring an authentication result (paragraphs [0054], e.g., the gateway router set a lifetime of the routing cache for each mobile node in accordance with a routing update interval time) by an authentication process using the information on the authentication (paragraphs [0052], [0079], [0089], [0109], e.g., when the duplication check result for a current address of the mobile node is affirmative), and

judges the authentication result as authentication failure in a case where the authentication result is not capable of being acquired within the time until acquiring the

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authentication result (paragraphs [0016], [0019], [0023]-[0024], e.g., the terminal checks the authentication data, and if it determines that the data is valid, it registers the care-off-address of the terminal device in the binding update).

Regarding claim 42, Saito discloses the radio communication management method according to claim 18, wherein the server which manages the link connection sets a predetermined connection prohibition time with respect to the mobile terminal (paragraphs [0054], e.g., the gateway router set a lifetime of the routing cache for each mobile node in accordance with a routing update interval time), and does not perform a process relating to the mobile terminal which has failed in the authentication only for the predetermined connection prohibition time after notification of the authentication failure in a case where the authentication failure is notified as the authentication result with respect to the mobile terminal (paragraph [0363], e.g., when the registration is not completed after a plurality of attempt, the mobile node 1 deletes the address using the virtual network prefix B and set the new address by using the physical network prefix C).

Regarding claim 21, Saito discloses a radio communication management server which manages link connection of a mobile terminal using HMIPv6 (paragraphs [0008], [0030], [0178], noted an IPv6),

, constituted to receive, from the mobile terminal, information for changing the link connection and information on authentication for accessing a desired network as one piece of acquired (paragraphs [0052], [0079], e.g., the gate way router performs a duplication check for the current address of the mobile node and transmits a registration acknowledgement message including the check result to the mobile node through the access router), and

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acquire each of the information for changing the link connection (paragraph [0027], e.g., a mobile node periodically transmits movement information of the node or transmits the information when moving between sub-networks to a home agent) and

the information on the authentication from the one piece of information (paragraph [0019], e.g., the terminal device 301 generates a binding update packet that includes an authentication header and the care-of-address of the terminal device 301).

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIMOTHY PHAM whose telephone number is (571)270-7115. The examiner can normally be reached on Monday-Friday; 7:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent P. Harper can be reached on 571-272-7605. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Timothy Pham/  
Examiner, Art Unit 2617

/VINCENT P. HARPER/  
Supervisory Patent Examiner, Art Unit  
2617